

Appl. No. 09/723,366
Amdt. Dated May 21, 2004
Reply to Office action of February 26, 2004

APP 1276

Amendments to the Specification:

Please replace the paragraph beginning at page 5, line 1 with the following:

A¹
Of particular import to the present invention is the function or feature within a wireless network called soft handoff. In a conventional prior art wireless network such as shown in FIG. 1A, a plurality of base stations 10 of which base stations 10₁ and 10₂ are depicted transmit or send information over the air to a plurality of mobile units 20. The range within which a mobile unit 20 can reliably receive information from a base station 10 defines a cell 21. As illustrated in FIG. 1A the cells 21₁, 21₂, 21₃ --- 21_n may be depicted as a honeycomb structure. As a mobile unit 20₂, for example, roams and moves further away from a base station 10₂ corresponding to cell 21₂ for base station 10₂, signal strength decreases. Further, as the mobile moves from one cell to another, the mobile station needs to switch from the serving base station, the base station for the cell it currently is in, to a target base station, the base station for the cell that it is moving to. The process of the mobile switching base stations is known as handoff.

Please replace the paragraph beginning at page 9, line 7 with the following:

A²
Broadly, our invention in one aspect is a method wherein network information processing at one layer is done remotely, distributed to other applicable resources that do not replicate the remote processing done at that layer, and then routed by such other resources to a final destination. We refer to this aspect of our invention as remote layering because layer processing for a first resource or node is done remotely at a second resource or node. In this way, a ~~node~~ base station can function autonomously, to support soft handoff without the need for a centralized unit to distribute traffic to multiple base stations and to select copies of traffic sent by a mobile via multiple base stations into the backbone network, thereby increasing network efficiency. In the context of a packet switched backbone network, such as an IP-based wireless network having autonomous base stations, remote layering allows a first base station to process the information at a first layer, ~~assembly~~ assemble that information into a protocol data unit or packet corresponding to the first layer, copy the assembled packet, and send a copy of the packet to a second base station. The second base station then relays the packet to a mobile unit without replicating the processing previously done at the first layer ~~on~~ by the first base station. As such, an IP-based wireless network can support soft handoff ~~with~~ without the need for any centralized control. Remote layering by obviating the need for central control, as done in the prior art, increases network efficiency.